

IN THE DRAWINGS:

Please replace the first sheet of drawings with the replacement sheet enclosed herewith. Specifically, this replacement sheet changes reference numerals "1" and "2" in FIG. 1 to - 14 - and - 22 - respectively.

REMARKS

Claims 1 – 30 are presently pending. In the above-identified Office Action, the Examiner objected to the Specification and Abstract. Claims 25, 29 and 30 were rejected under 35 U. S. C. § 112, first paragraph. Claims 13, 14, 16 and 17 were rejected under 35 U. S. C. § 112, second paragraph. Claims 1, 2, 4, 5, 11, 12, 15, 18, 22 – 24, 26 and 28 were rejected under 35 U. S. C. § 102(b) as being anticipated by Chandra *et al.* Claims 3, 6 and 19 were rejected under 35 U. S. C. § 103(a) as being unpatentable over Chandra *et al.* Claims 7 – 10, 20 and 21 were objected to as being dependent upon a rejected base claim. These claims were indicated as being allowable if rewritten in independent form to include the limitations of the base claim and any intervening claims. Claim 27 was allowed.

The indication of allowable subject matter is gratefully acknowledged. By this Amendment, Applicant has addressed the objections under 35 U. S. C. § 112. Claims 1 and 28 have been amended to include the limitations of Claim 7, less Claim 2, and Claim 7 has been canceled. Claim 26 has been amended to include the limitations of Claim 21, less those of Claims 18 and 20.

New Claims 31 – 53 have been added for consideration. Claim 31 includes the limitations of Claim 1, as previously presented, and Claims 18 and 20. Claim 32 includes the limitations of Claim 1, as previously presented, and Claim 21, less the intervening claims. Claims 33 – 52 depend from Claim 32 and are drafted along the lines of Claims 2 – 20, 22 and 23 respectively. Finally, Claim 53 includes the limitations of Claims 21 and 28 without the limitations of Claims 18 and 20.

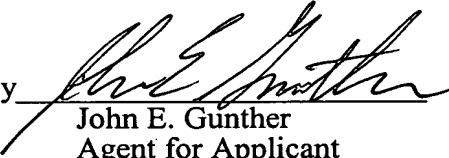
Claims 7, 29 and 30 have been canceled and minor changes have been made in the Abstract, Drawings and Specification per the Examiner's objections.

In accordance with the Examiner's stated reasons for allowance and indication of allowability, the claims as currently presented should be allowable.

As to the rejection of Claim 25 under 35 U. S. C. § 112, first paragraph, the Examiner is urged to consider that, as is known in the art, corresponding signal waves are generated with idler waves due to the requirement of conservation of energy with respect to the pump photon. OPOs operate to split pump photon energies to other photon energies consistent with the phase matching properties of the particular crystal in use. In the illustrative embodiment, AgGaSe₂ OPO signal wavelengths in the range of 4.8 – 4.0 mm are produced simultaneously with the 8 – 12 mm idler wavelengths in accordance with energy conservation of the 3.01 mm pump photon. Applicant therefore requests that this ground of rejection be withdrawn.

Accordingly, the present Application should be in proper form for allowance. Reconsideration, allowance and passage to issue are therefore respectfully requested.

Respectfully submitted,
J. Fukumoto

By 
John E. Gunther
Agent for Applicant
Registration No. 43,649

Raytheon Company
Corporate Patents and Licensing
EO/E4/N119
P.O. Box 902
El Segundo, CA 90245

(310) 647-3214
(310) 647-2616 (facsimile)